

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Cancelled):

Claim 2 (Cancelled):

Claim 3 (Currently Amended): An integrated circuit comprising:
a plurality of thermal sensors each placed in one of a plurality of different locations
across the integrated circuit;
an averaging mechanism to calculate an average temperature from the plurality of
sensors; and

~~The integrated circuit of Claim 1 further comprising~~ a register associated with the averaging mechanism to store a threshold temperature value and interrupt logic associated with the averaging mechanism to generate an interrupt if calculated average temperature exceeds the threshold temperature.

Claim 4 (Original): The integrated circuit of Claim 3 further comprising clock adjustment logic to decrease a clock frequency of the integrated circuit in response to an interrupt from the interrupt logic indicating that the threshold temperature has been exceeded.

Claim 5 (Original): The integrated circuit of claim 3 wherein the register is programmable by the integrated circuit.

Claim 6 (Original): The integrated circuit of claim 5 further comprising threshold adjustment logic to program the register to a different threshold temperature in response to an interrupt from the interrupt logic indicating that the threshold temperature has been exceeded.

Claim 7 (Original): The integrated circuit of claim 6 wherein the threshold adjustment logic is further to program the register to a second different threshold temperature in response to an interrupt from the interrupt logic indicating that the first different threshold temperature has been exceeded.

Claim 8 (Currently Amended): The integrated circuit of Claim [[1]] 3 further comprising clock adjustment logic to control the temperature of the integrated circuit by increasing and decreasing an integrated circuit clock frequency in response to the calculated average temperature.

Claim 9 (Currently Amended): The integrated circuit of Claim [[1]] 3 further comprising halt logic to halt operation of the integrated circuit in response to the calculated average temperature.

Claim 10 (Currently Amended): An integrated circuit comprising:
a plurality of thermal sensors each placed in one of a plurality of different locations
across the integrated circuit;
an averaging mechanism to calculate an average temperature from the plurality of
sensors; and

~~The integrated circuit of Claim 1 further comprising~~ an interrupt handler to display information regarding the calculated average temperature to a user of the integrated circuit.

Claim 11 (Currently Amended): The integrated circuit of Claim [[1]] 10 further comprising interrupt logic to generate a first interrupt if the calculated average temperature exceeds a first threshold and a second interrupt if the calculated average temperature exceeds a second threshold.

Claim 12 (Cancelled):

Claim 13 (Currently Amended): The method of Claim [[12]] 14 further comprising comparing each of the plurality of sensed temperatures to a threshold generating an interrupt in response thereto.

Claim 14 (Currently Amended): A method comprising:
sensing temperature at a plurality of different locations across an integrated circuit;

calculating an average temperature from the plurality of difference sensed
temperatures; and

~~The method of Claim 12 further comprising~~ storing a threshold temperature value in a register and generating an interrupt if the calculated average temperature exceeds the stored threshold temperature.

Claim 15 (Original): The method of Claim 14 further comprising decreasing a clock frequency of the integrated circuit in response to an interrupt indicating that the threshold temperature has been exceeded.

Claim 16 (Original): The method of Claim 14 further comprising programming the register to a different threshold temperature in response to an interrupt indicating that the threshold temperature has been exceeded.

Claim 17 (Original): The method of Claim 16 further comprising programming the register to a second different threshold temperature in response to an interrupt indicating that the first different threshold temperature has been exceeded.

Claim 18 (Currently Amended): The method of Claim ~~[[12]]~~ 14 further comprising controlling the temperature of the integrated circuit by increasing and decreasing an integrated circuit clock frequency in response to the calculated average temperature.

Claim 19 (Currently Amended): The method of Claim ~~[[12]]~~ 14 further comprising halting operation of the integrated circuit in response to the calculated average temperature.

Claim 20 (Currently Amended): A method comprising:
sensing temperature at a plurality of different locations across an integrated circuit;
calculating an average temperature from the plurality of difference sensed
temperatures; and

displaying information regarding the calculated average temperature to a user of the integrated circuit.

Claim 21 (Currently Amended): The method of Claim ~~[[12]]~~ 14 further comprising generating a first interrupt if the calculated average temperature exceeds a first threshold and a second interrupt if the calculated average temperature exceeds a second threshold.